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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/320,950 05/27/99 GLOVER

J 2797.004

EXAMINER

IM22/1108

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ART UNIT

PAPER NUMBER

1723

DATE MAILED:

11/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/320,950

Applicant(s)

GLOVER, JOHN N.

Examiner

David L. Sorkin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 46-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. In the office action mailed 26 April 2000 (paper No. 4), the examiner requested that the applicant provide any additional information known concerning IDS cite no. DT, "Criterion, Top Bed Catalysts and Support", such as the date published, how the document was obtained, and whether it is part of the entire document. No response to this request has been received.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 46-52 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

4. In light of applicants statements in the response filed 10 September 2001 (paper No. 15), which state that a trisoid "is a geometric form that results when the sum of the distances from two points minus the distance from a third point is kept constant". The originally filed application does not convey this definition. Furthermore, while the word "trisoid" is not widely used, this definition is in mathematical contradiction with the few previous uses of the word of which the examiner is aware, including the document submitted by applicant in the response filed 10 September 2001 (paper No. 15). This

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document states "One can also ask what curve results when the total distance from *three* given points is kept the same. [...] She called this result a trisoid." Apparently, applicant is referring to a latter portion of the document which refers to a which she did not refer to as a trisoid.

5. Regarding claim 48, while the limitation "having a size of 0.5 to 3 inches" is unclear as discussed below, the examiner is not aware of support for this limitation in the original specification. See *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1328, 56 USPQ2d 1481, 1487 (Fed. Cir. 2000) ("There is therefore no force to Purdue's argument that the written description requirement was satisfied because the disclosure revealed a broad invention from which the [later-filed] claims carved out a patentable portion").

6. Regarding claim 50, the examiner is not aware of any support for the limitation "... in graduated layers into the chemical reactor with each layer having a different packing factor ...".

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 46-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. In claim 46, It is unclear what is meant by "trisoid". This word is not defined in the specification and could not be found by the examiner in any dictionary or patent database. In the response filed 10 September 2001 (paper No. 15), applicant states

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that a trisoid "is a geometric form that results when the sum of the distances from two points minus the distance from a third point is kept constant". Applicant submitted with the response a document purportedly supporting this definition. However, the examiner's interpretation of the document is quite different. The document states "One can also ask what curve results when the total distance from *three* given points is kept the same. [...] She called this result a trisoid." Apparently, applicant is referring to a latter portion of the document which refers to a situation which she did not refer to as a trisoid.

10. Claim 48 is unclear what dimension (length, width, height) "having a size of 0.5 to 3 inches" applies to, especially considering the unit could be any shape.

11. In claims 48-52, "the step" should read "a step" if a step which has not been previously recited is being recited.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 46, 47, 49, 51 and 52 are rejected under 35 U.S.C. 102(b) as being anticipated by Hung et al. (DE 35 39 195). Note: all page and line numbers refer to the English language translation of DE 35 39 195. Regarding claim 46, Hung ('195) discloses a method of fluid distribution in a chemical reactor comprising the steps of providing a layer of ceramic filter units, at least some of the ceramic filter units having a

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plurality of elliptical openings (see fig. 3; page 10, lines 5-8); contacting an organic – based feed stream with the layer (see page 7, lines 8-22); and the stream is subdivided as a result of entering the openings (see page 11, lines 19-20) prior to the organic-based feed contacting a catalyst bed in the chemical reactor (see page 21, lines 5-7 and the English language Derwent abstract). Applicant argues that page 21, lines 5-7 imply a support as opposed to a filtering layer prior to a catalyst bed. However the abstract uses the term “guard bed”. Applicant is referred to Gary (US 6,096,278), col. 4, lines 17-28, which explains the use of the term “guard bed” in the art. Regarding claim 47, removing contaminants from an organic stream and providing the stream to a catalyst bed for further processing are disclosed (see page 21, lines 5-7). Regarding claim 49, a packing factor of about 200-500 ft²/ft³ is disclosed (see page 15, lines 14-17). Note, 1 cm⁻¹ = 30.48 ft²/ft³. Regarding claim 51, the units are fluted (see fig. 3). Regarding claim 52, Hung ('195) states a “rectangle with rounded corners” would be within the scope of the invention (see page 8, final paragraph).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hung ('195). While, as pointed out by the applicant, the maximum specific value of an example disclosed by Hung ('195) was 10 mm (0.39 inches), which is outside that

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claimed range of 0.5 to 3 inches. However, in *Gardner v. TEC, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions, the claimed device was not patentably distinct from the prior art device. See also *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955). Furthermore, Hung ('195) specifically states that sized may be varied (see page 11, lines 1-7) depending on production method. Therefore, it is considered that it would have been obvious to one of ordinary skill in the art to have optimized the size of the unit according to a production method. Regarding claim 50, Hung ('195) further discloses packing the ceramic unites in graduated layers into the chemical reactor (see page 21, lines 5-7 and the English language Derwent abstract) and each layer having a packing factor of about 200-500 ft²/ft³ is disclosed (see page 15, lines 14-17). Note, 1 cm⁻¹ = 30.48 ft²/ft³. It is not stated that each layer has a different packing factor. However, as described on page 15 of Hung ('195), the packing factor can be selected base upon intended use; therefore it is considered that it would have been obvious to one of ordinary skill in the art to have selected an appropriate packing factor for each layer, within the disclosed range.

Response to Arguments

16. Applicant argues that page 21, lines 5-7 imply a support as opposed to a filtering layer prior to a catalyst bed. However the abstract uses the term "guard bed". Applicant is referred to Gary (US 6,096,278), col. 4, lines 17-28, which explains the use of the term "guard bed" in the art.

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17. Applicant's arguments regarding size limitations are fully addressed above with regard to sections 112 and 103.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 703-308-1121. The examiner can normally be reached on 7:30 - 5:00 Mon.-Thur., Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

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872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David Sorkin

October 24, 2001



W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700